

# Alternative application of wine fining with novel yeast derivatives in organic quality

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## INTRODUCTION

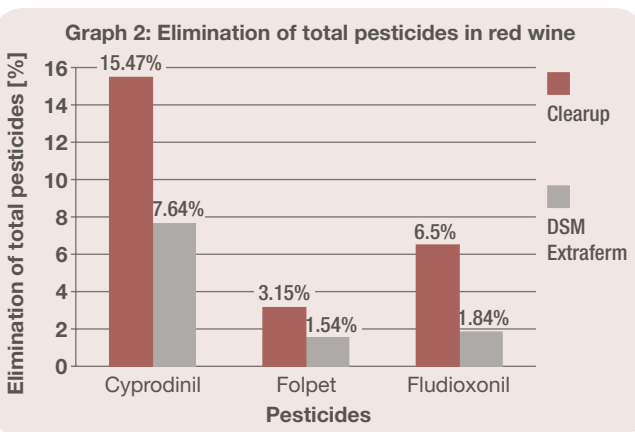
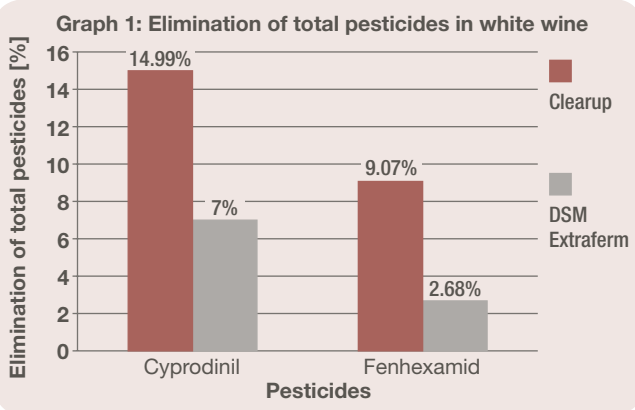
The aim of this work was to compare the adsorption capacity of **Clearup** against DSM Extraferm. Clearup is of specially prepared yeast cell walls of organic quality. DSM Extraferm however, is conventionally produced. In this study the adsorptive capacities of the two yeast derivatives on three different kinds of substances with negative influence on wine were tested; fatty acids, total phenols and pesticides.

These substances are reported in literature to be responsible for causing sluggish or stuck alcoholic fermentation. Or they are responsible for some negative off flavors in the wine.

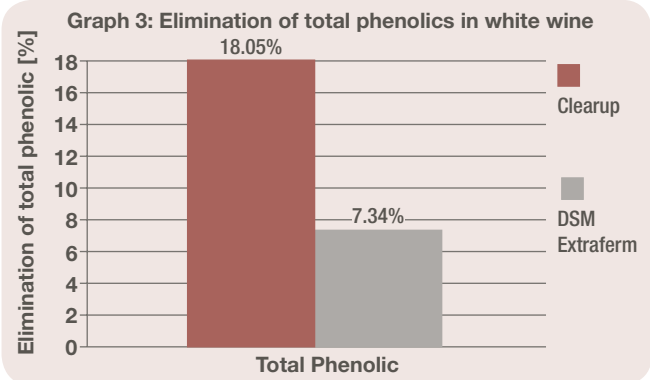
## METHOD

Fatty acids and pesticides were analysed using a gas chromatography device with mass spectrometer. Total phenols with the photometric determination while using Folin Ciocalteu.

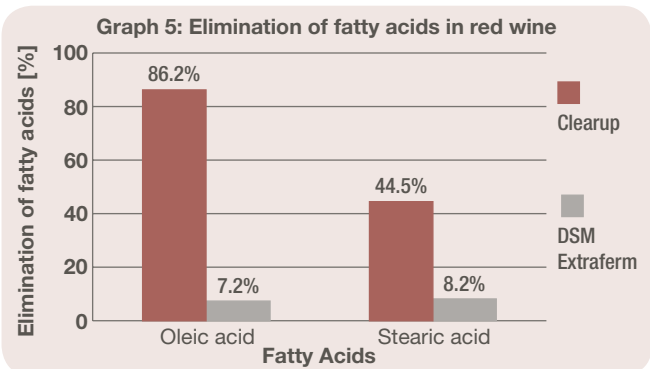
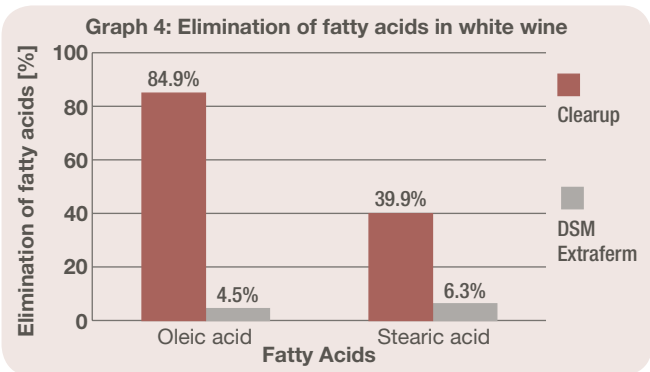
## RESULTS



Clearup shows an excellent adsorption power in the range of the pesticides. Wide differences of reduction was shown in white wine in conjunction with folpet 73.4% and cyprodinil with 53.3%. Just as well were the results for the analysis of red wine. Therefore the differences totalled 51.11% with folpet, 49.38% with cyprodinil and 28.31% with fenhexamid.



**Total Phenolic:** Comparing both products the organic product Clearup shows an adsorption of 59.33% more than the conventional product.



**Reduction of fatty acids:** The best margins of this work were shown of Clearup in conjunction with fatty acids. As shown in graphs 4 and 5, Clearup adsorbs oleic acid in both red and white wine equally well. This means in contrast to DSM Extraferm, the reduction of oleic acid by Clearup is nearly 95% more in both wine types (94.7% white wine) and (91.5% red wine).

The elimination of the second analysed fatty acid stearic acid was not as good as the oleic acid, but still much higher compared to DSM Extraferm. The differences being 84.2% for white wine and 81.5% for red wine.

The study could show that **Clearup** is a very effective fining tool to remove sensorial negative substances in wine and in addition to that inhibitory substances for the fermentation.

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